IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (currently amended) A method for producing a cylindrical sliding surface (1) with a bearing axis (1.3) by arc spraying of material particles of an Fe-based alloy, ~~characterized in that~~ wherein

the sliding surface (1) is applied by a rotating spraying tool, and

the microstructure of the sliding surface (1) is oriented in the circumferential direction (7) or is oriented so as to deviate by at most 45° from the circumferential direction (7) with respect to the bearing axis (1.3).

2. (currently amended) The method as claimed in claim 1, ~~characterized in that~~ wherein 95 to 100% of all the material particles to be sprayed are melted, and after the spraying operation recesses (1.1) or valley structures are produced in the sliding surface (1) and/or on the surface (1.2) by precision turning.

3. (currently amended) The method as claimed in claim 1 ~~or 2~~, ~~characterized in that~~ wherein the sliding surface (1) and the recesses (1.1), after the precision-turning operation, are machined by a microfinishing process, such as, for

example ceramfinishing.

4. (currently amended) A sliding surface (1) of a bearing, which has been applied by arc spraying to a support surface (2), the sliding surface (1) being formed from an Fe-based alloy, ~~characterized in that~~ wherein

the sliding surface (1), in the region of a surface (1.2) has a valley structure formed from recesses (1.1),

the recesses (1.1) forming a flow obstacle (4) and having an orientation (8) with respect to a bearing axis (1.3) which deviates by at most 45° from the circumferential direction (7).

5. (currently amended) The sliding surface (1) of a bearing as claimed in claim 4, ~~characterized in that~~ wherein the recesses (1.1) form an oil-holding volume which amounts to between 0.01 and 2 mm^3 per cm^2 of surface (1.2).

6. (currently amended) The sliding surface (1) of a bearing as claimed in claim 4 ~~or 5~~, ~~characterized in that~~ wherein the extent of the flow obstacle (4) formed by the surface (1.2) of the sliding surface (1) has a mean Peklenit factor of less than 1.

7. (currently amended) The sliding surface (1) of a bearing as claimed in claim 4 ~~one of claims 4 to 6~~, ~~characterized in that~~ wherein the sliding surface (1) is formed from a

molybdenum-free Fe-based alloy and/or is formed from an Fe-based alloy which contains between 0.8 and 0.9% of carbon.

8. (currently amended) The sliding surface (1) of a bearing as claimed in claim 4 ~~one of claims 4 to 7, characterized in that~~ wherein the sliding surface (1) has a roughness of between 0.1 and 0.5 mm following the spraying and precision-turning operations.

9. (currently amended) The sliding surface (1) of a bearing as claimed in claim 4 ~~one of claims 4 to 8, characterized in that~~ wherein the sliding surface (1) has a roughness value of between 0.01 and 0.03 mm following the spraying and precision-turning operations.

10. (currently amended) The sliding surface (1) of a bearing as claimed in claim 4 ~~one of claims 4 to 9, characterized in that~~ wherein the sliding surface (1) is designed as a running sleeve for a piston of an internal combustion engine, and the support surface (2) forms a cylinder wall of a cylinder casing.